

Electrochemical energy storage and photocatalysis





Overview

What is the difference between photocatalysis and electrocatalytic?

Photocatalysis can store solar energy into molecular bonds or utilize solar energy to degrade pollutants by leading various chemical reactions with the help of photocatalysts, while electrocatalysis can implement parallel or similar functions and reactions under external voltage.

What is solar-to-electrochemical energy storage in solar batteries?

Solar-to-electrochemical energy storage in solar batteries is an important solar utilization technology alongside solar-to-electricity (solar cell) and solar-to-fuel (photocatalysis cell) conversion. Integrated solar batteries that integrate photoelectrodes with redox-electrodes realize indirect solar energy.

What is synergistic photo/electrocatalysis?

Impressively, synergistic photo/electrocatalysis enables the simultaneous utilization of photo- and electrochemical energy, exhibiting promising potential for facilitating or initiating various energy conversion and storage.

How does a photocatalyst work?

On the one hand, the photocatalyst can be utilized to absorb light energy and reduce the additional heating energy consumption; on the other hand, the local high temperature can accelerate the reaction rate, improve the conversion efficiency, and reduce the cost of reaction time.



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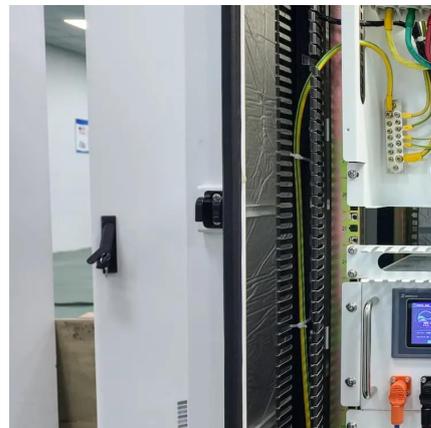
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